

# Santa Barbara Water

*June 2011*



City of Santa Barbara Annual Water Quality Report

## Water Supply Plan Update

### 20-Year Water Plan

Cooperatively, the City staff and the City Board of Water Commissioners have conducted a comprehensive analysis of our various water supply sources to ensure an adequate water supply into the future. The updated water supply plan will guide the City's water supply management for the next twenty years.

In most years, our needs can be met with local surface water from Lake Cachuma and Gibraltar Reservoir, along with small amounts of groundwater and State water. Water conservation and recycled water help reduce the amount of water required from these sources so we can save it for prolonged drought.

### Planning for Drought

Periodic drought is our most common water supply challenge. Fortunately, Lake Cachuma's multi-year storage capacity minimizes the impact of a few dry years. During a drought of three or more years, the City typically pumps more groundwater and orders more State water. During the most recent severe drought of 1987-1991, the City supplemented supplies by constructing a desalination facility. If needed, the facility could be reactivated for an estimated cost of \$18 million. City water customers really pitched in during the last drought by using water conservation techniques to greatly reduce water demand.

### What's in the New Plan?

Desalination's role is re-evaluated, with a plan to postpone its use, because of the high cost of reactivation and operation of the desalination facility. Opportunities for greater recycled water use are considered to further reduce potable water demand. Annual water use has declined by about 15% since 1988. This downward trend is expected to continue with stricter plumbing codes and more efficient appliances, coupled with ongoing water conservation measures and an increasingly water-wise public. For more information on water conservation, visit us at [savewatersb.org](http://savewatersb.org) or call 805 564-5460.



*The serene Lake Cachuma is Santa Barbara's primary source of water.*



## Drinking Water Treatment Regulations

Most of the City's drinking water comes from Lake Cachuma and Gibraltar Reservoir. A portion of the City's water supply also comes from groundwater sources. As water travels over land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in the water source include:

- Microbial contaminants such as bacteria and viruses that may come from wildlife or human activity.
- Inorganic contaminants such as salts and metals that can be naturally-occurring or result from human activities.
- Radioactive contaminants, which can be naturally-occurring.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm-water run-off, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes, petroleum production and use, or agricultural applications and septic systems.

To ensure safe drinking water, federal and state regulations limit the amount of certain contaminants in public water systems. Regulations also establish limits for contaminants in bottled water to provide protection for public health.

*In 2010, as in previous years, City of Santa Barbara water met all primary state and federal standards for drinking water. All of the drinking water that comes from Lake Cachuma and Gibraltar Reservoir is treated at the Cater Water Treatment Plant before being distributed to customers. Those who have questions about water quality may call the water department in their community and ask for a copy of their Consumer Confidence Report, such as this one.*

## Special Info Available

*Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/ Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline 1-800-426-4791.*

## Safe Drinking Water Hotline and Web Site

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at 1-800-426-4791 or visiting their website at [www.epa.gov/safewater/](http://www.epa.gov/safewater/).

The Santa Ynez River feeds Lake Cachuma.



Compliance with drinking water regulations requires continuous monitoring of filters for turbidity levels during the treatment process. On February 8, 2011, for a 24-hour period, the turbidity meter for one filter was not returned to service after maintenance, which is a violation of the regulations. As our customers, you have a right to know of this monitoring violation. During this period, the turbidity levels for the combination of all operating filters were continuously monitored and met water quality standards.

Nitrate in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness. Symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

## Your Water Softener Setting

The City's water has an average hardness range of **20 to 26 grains per gallon**. One grain per gallon equals **17.1 milligrams per liter**.

## Radon

Radon is a radioactive gas that you cannot see, taste or smell that is found throughout the United States. It occurs naturally in certain rock formations. As a result, radon can be found in Santa Barbara's groundwater. Groundwater is a small part (9.16%) of the City's total water supply. Radon has not been detected in the City's surface water. Radon can enter homes through cracks or holes in foundations and floors. Radon can also get indoors when released from tap water. Test your home if you are concerned about radon. Testing is inexpensive and easy. For additional information call your State radon program 1-800-745-7236, the EPA Safe Drinking Water Act Hotline 1-800-426-4791, or the National Safe Council Radon Hotline 1-800-SOS-RADON.



## Lead in Plumbing

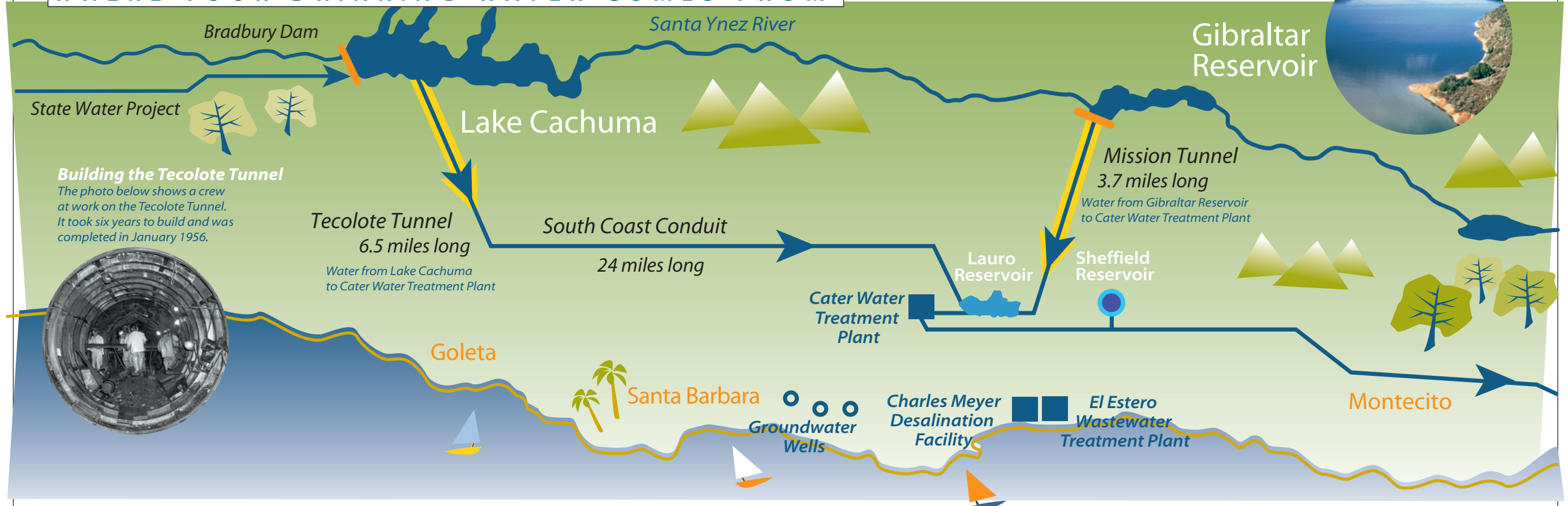
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. City of Santa Barbara is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. The City's water lead and copper samples are at low levels. However, if

your water has been sitting for a number of days, you can minimize lead exposure before using the water for drinking or cooking, by flushing your tap for 30 seconds. Additionally, if you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

### Limited Potential for Contamination

The City has evaluated the vulnerability of our water supplies to contamination. For potential contaminants at Lake Cachuma, the use of two stroke engines contributes MTBE to the water. Gibraltar Reservoir's remote location, and the restriction of access to the reservoir limit opportunities for contamination. City groundwater supplies are generally located deep beneath the surface. Nonetheless, there is the potential for contaminants from surface sources such as gasoline stations and dry cleaners to reach City water supplies. All water sources are carefully monitored to ensure that pollutants are not present at levels exceeding state and federal standards. For more information, call (805) 568-1008.

## WHERE YOUR DRINKING WATER COMES FROM



# 2010 City Drinking Water Quality Report

## Definitions

**Public Health Goal (PHG)**  
The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

**Maximum Contaminant Level Goal (MCLG)**  
The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

**Maximum Contaminant Level (MCL)**  
The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

**Maximum Residual Disinfectant Level Goal (MRDLG)**  
The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**Maximum Residual Disinfectant Level (MRDL)**  
The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Regulatory Action Level (AL)**  
The concentration of a contaminant which, if exceeded, triggers a treatment or other requirements which a water system must follow.

**Treatment Technique (TT)**  
A required process intended to reduce the level of contaminants in drinking water.

**Primary Drinking Water Standards (PDWS)**  
MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

**Secondary Drinking Water Standards (SDWS)**  
MCLs for contaminants that affect taste, odor, or appearance of drinking water. Contaminants with SDWS do not affect the health at MCL levels.

**Unregulated Contaminant Monitoring Regulations (UCMR)**  
Data generated by the new UCMR will be used to evaluate and prioritize contaminants on the Drinking Water Contaminant Candidate List, a list of contaminants EPA is considering for possible new drinking water standards. Also known as "State Regulated Contaminants with No MCLs."

## Legend

- µg/L:** Micrograms per liter (parts per billion)  
**mg/L :** Milligrams per liter (parts per million)  
**ND:** Not detected at testing limit  
**NTU:** Nephelometric Turbidity Units  
**pCi/L :** PicoCuries per liter (a measure of radiation)  
**µmhos/cm:** Micromhos per centimeter  
**DBP:** Disinfection By-products  
**TOC:** Total Organic Carbon  
**NA:** Not applicable or no standard or no data

## PRIMARY STANDARDS

Regulated Contaminants with Primary MCLs or MRDLs							
<b>Microbiological Contaminants</b>		MCL 5% of monthly samples test positive	PHG MCLG, 0	Highest % of Positives 1.33%		Major Sources in Drinking Water	
Total Coliform Bacteria				Highest Single Measurement 0.06		Samples ≤0.3 NTU 100%	
Turbidity (NTU)		TT = 1 NTU TT = 95% of samples ≤0.3 NTU	NA			Natural river sediment/soil run-off	
<b>Lead/Copper Rule</b>		<i>Monitored at the Customer's Tap in 2009</i> The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.		90th % Value	# of Sites Sampled	# of Sites Exceeding Action Level	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives
Copper (mg/L)		AL, 1.3	0.3	0.26	31	0	
Lead (µg/L)		AL, 15	0.2	2.9	31	0	
<b>Disinfection By-products, Disinfectant Residuals, and Disinfection By-product Precursors</b>				System Wide Average		System Wide Range	
Total Trihalomethanes (µg/L)		80	NA	42.3		1.7 - 78.3	
Haloacetic Acids (µg/L)		60	NA	11.0		ND - 25	
Disinfectant - Chlorine as Cl <sub>2</sub> (mg/L)		MRDL, 4.0	MRDLG, 4	0.72		0.11 - 1.82	
		MCL	Public Health Goal	Surface Water Average	Surface Water Range	Groundwater Average	Groundwater Range
Control of DBP Precursors - TOC (mg/L)		TT	NA	2.62	2.4 - 2.9	0.22	ND - 0.62
<b>Radioactive Contaminants</b>							
Gross Alpha Particle Activity (pCi/L)		15	MCLG, 0	ND	NA	0.72	ND - 4.90
Radon (pCi/L)		NA	NA	NA	NA	450	350 - 590
<b>Inorganic Contaminants</b>							
Aluminum (mg/L)		1	0.6	0.08	0.02 - 0.28	0.06	ND - 0.72
Arsenic (µg/L)		10	0.004	1.6	ND - 4.6	0.8	ND - 17.6
Chromium (µg/L)		50	MCLG, 100	1.8	ND - 5.1	3.7	ND - 12.9
Fluoride (mg/L)		2.0	1	0.39	0.32 - 0.5	0.34	0.20 - 0.58
Nitrate as NO <sub>3</sub> (mg/L)		45	45	ND	NA	7.85	ND - 34.4
Selenium (µg/L)		50	30	ND	NA	1.9	ND - 7.4
State Regulated Contaminants with No MCLs, i.e. Unregulated Contaminants							
		MCL	Public Health Goal	Surface Water Average	Surface Water Range	Groundwater Average	Groundwater Range
Boron (µg/L)		Notification Level, 1000	NA	350	NA	120	80 - 170
Hexavalent chromium, Cr VI (µg/L)		NA	NA	0.04	ND - 0.2	0.6	ND - 2.1

## SECONDARY STANDARDS

*Aesthetic Standards Established By the State of California, Department of Health Services.  
No adverse health effects from exceedance of standards.*

Regulated Contaminants with Secondary MCLs							
	MCL	Public Health Goal	Surface Water Average	Surface Water Range	Groundwater Average	Groundwater Range	
Color (Units)	15	NA	ND	NA	0.48	ND - 5	Naturally-occurring organic materials
Copper (mg/L)	1.0	NA	0.02	0.01 - 0.02	0.05	ND - 0.21	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Iron (µg/L)	300	NA	2.85	ND - 37	44	ND - 193	Leaching from natural deposits
Manganese (µg/L)	50	NA	0.8	ND - 4.9	66.1	ND - 200	Naturally-occurring organic materials; causes discoloration of water
Methyl-tert-butyl ether (MTBE) (µg/L)	5	NA	ND	NA	1.3	3.2 - 7.8	Leaking underground gasoline storage tanks; discharge from gasoline and chemical factories
Threshold Odor Number at 60 °C (units)	3	NA	5	1 - 10	7	1 - 12	Naturally-occurring organic materials
Turbidity, Laboratory (NTU)	5	NA	0.11	0.05 - 0.23	0.49	0.13 - 2.09	Soil run-off
Total Dissolved Solids (mg/L)	1000	NA	614	560 - 678	775	522 - 1150	Run-off / leaching from natural deposits
Specific Conductance (µmhos/cm)	1600	NA	884	794 - 967	1166	835 - 1637	Substances that form ions when in water; seawater influence
Chloride (mg/L)	500	NA	21.4	17 - 25.2	90.7	33.8 - 184	Run-off / leaching from natural deposits; seawater influence
Sulfate (mg/L)	500	NA	264	220 - 361	222	146 - 310	Run-off / leaching from natural deposits
Additional Constituents							
pH (units)	NA	NA	8.15	8.03 - 8.43	6.95	6.77 - 7.25	
Total Hardness as CaCO <sub>3</sub> (mg/L)	NA	NA	389	342 - 444	476	315 - 672	
Total Alkalinity as CaCO <sub>3</sub> (mg/L)	NA	NA	190	174 - 210	244	190 - 307	
Calcium as Ca (mg/L)	NA	NA	87.5	77.7 - 100	124	84.1 - 163	
Magnesium (mg/L)	NA	NA	39.3	33.3 - 45.4	40.0	24.9 - 68.1	
Sodium (mg/L)	NA	NA	46.1	42.4 - 50.4	67.2	6.1 - 100	
Potassium (mg/L)	NA	NA	4.10	3.6 - 4.71	2.00	1.31 - 3.27	
Uranium (µg/L)	NA	NA	NA	NA	3.0	ND - 6.7	

**Note:** Listed in the table above are substances detected in the City's drinking water. Not listed are more than 135 regulated and unregulated substances that were below the laboratory detection level. The City has received an extension to comply with the new Federal drinking water standards for disinfection by-products. Nonetheless, the City is currently meeting the new standards.



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***Get the latest on Santa Barbara's drinking water.***

*The City distributes this Annual Water Quality Report to customers as required by federal regulations.*



## Save Water Now – It's the Right Thing to Do!

- Rebates available on water-wise plants, irrigation system upgrades, mulch, clothes washers and more
- Adjust your sprinkler timer's schedule based on the weather – use the landscape watering calculator and watering index
- Receive a free water check-up for your home or business
- Rebates available on toilets and clothes washers



***For more information, go to [savewatersb.org](http://savewatersb.org) or call (805) 564-5460.***

## En Español

Este informe contiene información muy importante sobre su agua de beber. Hable con alguien que lo entienda bien y pueda traducirlo para usted. Si usted tiene preguntas acerca del agua de la ciudad, por favor llame a Don Montoya, a la oficina de Recursos del Agua, al teléfono (805) 564-5460.

## For More Information

**Questions on water quality, call the laboratory analysts at (805) 568-1008.**

**Questions on the City's water system, call (805) 564-5387.**

**City of Santa Barbara Board of Water Commissioners meets at 3:00 p.m. on the second Monday of each month. Board sessions are open to the public and are usually held in the Water Resources Conference Room, located on the third floor at 619 Garden Street.**

**On the web: [SantaBarbaraCA.gov/water](http://SantaBarbaraCA.gov/water)**

SANTA BARBARA



Questions on Water  
**Call 805-564-5460**



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